

## Dimensional Analysis Practice

1. How many gallons are in 2.5 liters?
2. How many joules are in 341 calories?
3. How many days are in 12,583 seconds?
4. Convert 36.7 miles into kilometers.
5. The density of air is  $1 \text{ kg/m}^3$ . What is the density of air in  $\text{g/cm}^3$ ?
6. The density of water is  $1.0 \text{ g/cm}^3$ . What is the mass of water in kilograms in a bathtub whose volume is  $3 \text{ m}^3$ .
7. Convert 65 mi/h to m/s.
8.  $2.5 \times 10^{24}$  molecules = \_\_\_\_\_ moles
9.  $7.5 \times 10^2$  mL He at STP = \_\_\_\_\_ molecules
10. Calculate the number of feet in a 5 km race.
11. How many joules are in 341 calories?
12. In medieval Britain, property was often measured in units such as fardells, nooks, yards, and hides. Using the following conversions, calculate the number of fardells in eight hides.  
(2 fardells = 1 nooke, 4 nookes = 1 yard, 4 yards = 1 hide)